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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/099,710

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Shu Lin

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JOSEPH S. TRIPOLI

THOMSON MULTIMEDIA LICENSING INC.

2 INDEPENDENCE WAY

P.O. BOX 5312

PRINCETON, NJ 08543-5312

EXAMINER

FLETCHER, JAMES A

ART UNIT

PAPER NUMBER

2621

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/099,710

Applicant(s)

LIN ET AL.

Examiner

JAMES A. FLETCHER

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 28 February 2008 have been fully considered but they are not persuasive.

In re pages 3 and 4, Applicant's Representative states: "there is absolutely no teaching, suggestion or disclosure in Duruoz for a method, and systems for performing a trick mode on a video signal including at least 'setting the display indicator of the picture being repeated to a predetermined value' and 'setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value' as taught n the Applicant's Specification and claimed by at least the Applicant's claim 1."

The Examiner respectfully disagrees. Although the Examiner feels the reference stands on its own, it appears that further explanation may help clarify the issues brought forth by the Applicant's Representative.

The Examiner understands the Applicant's use of "display indicator of the picture being repeated" to be the number of times a frame is repeated in a slow trick play mode. This is explicitly disclosed in Duruoz in Col. 6, lines 56-58, where the number of times the frame is displayed is disclosed to be the reciprocal of the slow sped ratio. The indicator is therefore clearly and explicitly set by the slow speed ratio, meeting the instant application's claimed "setting the display indicator of the picture being repeated to a predetermined value."

The Examiner further understands the "display indicators of subsequent pictures of the picture being repeated" to mean that subsequent pictures are also repeated the same number of times, and therefore have the same slow speed ratio, again meeting the instant application's "setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value."

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 8-12, 14, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Duruoze et al (6,487,642).

Regarding claims 1-2, 9, 11-12, and 19, Duruoze et al disclose a method and system for performing a trick mode on a video signal comprising:

- receiving a trick mode command (Col 6, lines 43-46 "Trick play commands are processed by buffering the command in the trick play command buffer in DRAM and setting a flag to subsequently invoke the state transition handler 80 that calls upon trick play commands subroutines");
- in response to the trick mode command, repeating a picture in the video signal to form a trick mode video signal, wherein the picture contains a display indicator (Col 7, lines 52-55 "The slow forward state 104 achieves slow forward trick plays by decrementing a counter for the number of

- repetitions of a frame to display between forward steps" and Col 15, lines 13-16 "a repeat value identified in the "slow forward" exclusive command is stored into the memory of the ASIC, for use in later determinations of the speed at which the slow forward processing should proceed");
- setting the display indicator of the picture being repeated to a predetermined value (Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times"); and
 - setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value (Fig. 13D step 367 "Set Repeat Counter = Repeat Value").
 - wherein the trick mode is a freeze mode (Col 7, lines 31-32 "The pause state 96 causes a current frame to be repeatedly displayed")

Regarding claims 4 and 14, Duruo et al disclose a method and system wherein the display indicator is set as a temporal reference field having an integer value (Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times").

Regarding claims 8, 10, 18, and 20, Duruo et al disclose a method and system comprising implementing the receiving, repeating and both setting steps at a first location (Col 2, lines 32 "This command manager receives commands from the host" and Col 8, lines 7-8 "these internal commands include...video repeat frame" and Col 15, lines 13-14 "a repeat value identified in the 'slow forward exclusive command is stored

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into the memory” – these functions are performed by the command manager) and decoding at least a portion of the trick mode video signal at a second location (Col 8, lines 9-13 “These internal commands are not generated by the host processor 39 and are instead generated by the ASIC 11, e.g., during a synchronizing routine, to accomplish things such as allowing the audio and video decoding to synchronize”).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruoz et al.

Regarding claims 5 and 15, Duruoz et al suggest a method and system wherein the transmission comprises at least a first reference picture and a second reference picture to predict the picture to be repeated (Col 11, line 29 “MPEG” which is known to contain multiple reference and predictive pictures), wherein each reference picture contains a display indicator (Col 6, lines 56-58 “Slow Forward” which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times”).

The Examiner takes official notice that MPEG is known to those of skill in the art to comprise multiple reference pictures and predictive pictures, as well as pictures that are both predicted and reference for other predicted pictures.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Duruoz et al in order to specify multiple predictive pictures for repetition in trick play modes.

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruoz et al as applied to claims above, and further in view of Metz et al (5,978,855).

Regarding claims 3 and 13, Duruoz et al suggest a method and system wherein a bi-directional predictive picture is an image that can be repeated (Col 11, line 29 "MPEG") and does not rule out the use of such a picture, but does not specifically disclose repeating of that bi-directional predictive picture.

Metz teaches the use of all frames as being available as still pictures (Col 45, lines 40-41 "all of the frames relate to a single freeze-frame image").

As suggested by Duruoz et al and taught by Metz, once a frame has been decoded, it is available for repetition in a slow trick play mode, removing the need to decode another frame when it is unnecessary..

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a bi-directional predictive picture for repetition in a freeze-frame trick-play mode.

7. Claims 6-7, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruoz et al as applied to claims above, and further in view of McLaren (WO 96/13121).

Regarding claims 6, 7, 16, and 17, Duruoz et al disclose a method and system setting each of the display indicators as temporal reference fields having integer values

(Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times"); but are silent regarding setting display indicators to various values.

McLaren teaches the setting of the display indicator of the second reference picture further comprises setting the integer value of the temporal reference field of the second reference picture an integer value higher than the integer value of the temporal reference field of the picture being repeatedly displayed during the trick mode to maintain a proper display order (Page 9, lines 34-37 "calculating the Presentation Time Stamp and Decode Time Stamp PTS/DTS values such that each TP 1 frame is presented the necessary number of frame times apart").

As suggested by Duruoz and taught by McLaren, a presentation of a given number of identical frames (still picture or slow playback) is easily accomplished by first presenting the original picture, followed by a number of identical copies of that picture. The number of copies must be less than the total number of pictures, as there is at least one original picture displayed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to present a smaller number of copies of the picture than the total number of pictures.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES A. FLETCHER whose telephone number is (571)272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John W. Miller/
Supervisory Patent Examiner, Art Unit 2623

JAF
10 June 2008